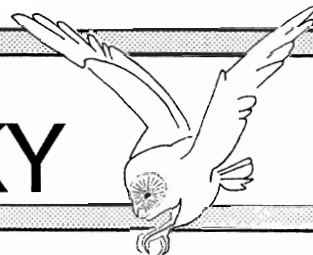


NATURALLY KENTUCKY



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"Sorry, you're too late"

"You should have been here last year." "There was nothing like it in the county." "I am sorry my kids will never get to see it."

These words have been heard too many times. For nearly 14 years, Kentucky State Nature Preserves Commission biologists have travelled across the state looking for those gems of Kentucky that have been left untouched by man. They have scrambled up the rugged face of Pine Mountain, waded chest-deep through swamps, and baked during the dog days of August following leads to find Daniel Boone's Kentucky. As late as 1940, large areas of primeval forest, tall grass prairie, and foreboding swamp-land painted the landscape of the Commonwealth. Today, Commission biologists estimate that less than 0.5% of Kentucky, or only one in every 200 acres, remains as natural areas.

This loss of our natural inheritance has not gone unnoticed. The 1990 Kentucky General Assembly appropriated \$300,000 to the Commission for each year of the current biennium for the purchase of these unique areas. This act was significant because it marked the first time

since the Commission's establishment in 1976 that General Fund dollars had been allocated to acquire these living museums.

The Commission has identified many natural areas that are of national or statewide significance. In seeking to protect them, we only acquire natural areas that owners willingly agree to sell. To protect these areas the Commission often works with the Kentucky Chapter of The Nature Conservancy, a private, non-profit conservation organization. The Conservancy can act much faster than state government to buy an imperiled area. Another article in this newsletter identifies some of the natural areas we have already purchased or are in the process of acquiring with this year's \$300,000 appropriation.

It has been estimated that by the year 2000 most unprotected natural areas will have been destroyed. With them we will also lose the chance to show our children what Kentucky was really like. We hope that with the recognition of the need to protect our natural inheritance and armed with sufficient funds, we will not have to tell our children, "Sorry, you're too late."

Commission Hosts Heritage Conference

The Commission is authorized to inventory the Commonwealth for natural areas and to establish a statewide system of nature preserves. To accomplish this goal the agency in 1978 adopted a multifaceted computer information system developed by The Nature Conservancy known as the Natural Heritage Program. The Heritage program was designed to gather, track, and analyze information on the earth's unique and endangered biological resources. Since its development in the late 1970's the network of Heritage data centers has grown to include programs in all 50 states, four Canadian provinces, and twelve Latin American countries.

In an effort to enhance communication among this widespread network, regional meetings are held every two years. Kentucky, a member of the Southern Region, was asked last year to attempt something never tried before, to host a joint regional conference including both the Eastern

and Southern regions. From September 25-28, 1990, biologists from 26 states, Canada, and Latin America descended upon the Commonwealth. Conference participants totalled 192 individuals who travelled from Ontario, Canada to Florida and from Maryland to Oklahoma with one individual flying in from California for the four day conference.

The meeting, held at the Best Western Park Mammoth Resort just outside Mammoth Cave National Park, was filled to capacity with botanists, ecologists, zoologists, data managers, and program coordinators. Commission Chairman Mrs. W. L. Lyons Brown and Mr. David Mihalic, Superintendent of Mammoth Cave National Park, welcomed the group. John Sawhill, President of The Nature Conservancy, gave the keynote speech and discussed his vision of the role the Conservancy will play in protecting the diversity of the planet. Dr. Orie Loucks from
(continued on page 3)

New Preserves Dedicated

The Kentucky State Nature Preserves Commission dedicated five natural areas into the state preserve system in 1990, bringing the total of dedicated acreage to 6,115 acres. Two of the preserves, Flat Rock Glade and Raymond Athey Barrens, were purchased from The Nature Conservancy. Dinsmore Woods and Boone County Cliffs are owned by The Nature Conservancy but were dedicated this summer to provide the highest level of land protection possible. Logan County Glade is owned by the county and will be managed jointly by the Commission and the county fiscal court.

Flat Rock Glade is a 64-acre preserve in Simpson County. Several large, flat expanses of limestone bedrock are found within the otherwise wooded preserve. The unusual limestone outcroppings provide habitat for several rare plant species including Fame flower, Sundrops, Necklace glade cress, and Butler's quillwort.

Raymond Athey Barrens, named in honor of the man who discovered the site, is a 63-acre preserve in Logan County. The preserve supports several plant communities with a high diversity of associated species. The barrens are typified by the open-grown Post and Black jack oaks that dominate the woodland canopy. Glades occur as small openings within the woods. The soils are thin with bedrock at or near the surface. Rare species known from this

preserve include the Prairie gentian, Sideoats grama, and Upland privet. An outstanding display of prairie wildflowers can be observed in late summer.

Logan County Glade is owned by the county and protects 41 acres of limestone glade within the city of Russellville. The Commission worked with county officials to protect this significant site due to the high quality of the glade and the presence of six species of rare plants, including Carolina larkspur, Fame flower, and Glade violet.

Ownership of Boone County Cliffs and Dinsmore Woods has been retained by The Nature Conservancy, but the areas were dedicated into the state nature preserve system in order to provide the highest level of protection for both properties. Dinsmore Woods is a 106-acre maple-oak-ash forest known for its stands of mature timber. Another 28 acres were added to the previously dedicated acreage at Boone County Cliffs. This preserve harbors an uncommon amphibian, the Redback salamander. The cliffs are composed of glacial outwash that is dated to approximately 700,000 years ago.

Contact Joyce Bender, Stewardship Coordinator, for further information about these new additions to our nature preserve system.

Volunteers in Action

Volunteers have been loose in several state nature preserves this past year. The next time you visit Beargrass Creek, Jesse Stuart, Bad Branch, Boone County Cliffs, or Six Mile Island be sure to look for the evidence that points to their presence on these preserves. Indicators vary with the type of objects they left behind, from such obvious items as boardwalks and parking lots to more subtle things including cleared trails and erosion protection.

The Commission would like to thank those individuals and organizations that made these improvements possible. Thanks to a generous donation of 20 tons of gravel by Armco Steel and three power poles from Kentucky Power in Ashland, the parking facilities at Jesse Stuart State Nature Preserve were upgraded. The Armor Elevator Company in Louisville donated over 4,000 feet of used elevator cable for a streambank stabilization project on Six Mile Island. The donations provided by these Kentucky businesses enabled the Commission to stretch its preserve maintenance budget even farther.

Trail work at Bad Branch and Boone County Cliffs was completed with the help of volunteers led by our dedicated volunteer coordinators Dan Danford and Bob and Ruth Matheny. Routine trail maintenance and a beautiful boardwalk at Beargrass Creek are the results of hard work by a young adult work crew sponsored by Operation Brightside in Louisville. The Commission especially wishes to thank Nancy Theiss, Director of the Nature and Conservation Center, for developing these projects at Beargrass Creek and seeing them through to successful conclusions.

Boy Scouts from troop 677 in Hardin County removed more cedar trees at Jim Scudder State Nature Preserve this past winter as part of our ongoing prairie restoration effort. This summer volunteers helped plant trees on Six Mile Island in an effort to curb streambank erosion. Our thanks goes to River Fields, Inc. and Laur Fuson, Armon Stone, Henry Bickel, Dave Caudill, Dan (continued on page 3)

Breeding Bird Atlas Flying High!

In 1985 the Commission entered into a cooperative project with the Nongame Wildlife Program of the Kentucky Department of Fish and Wildlife Resources (KDFWR) and the Kentucky Ornithological Society called the Kentucky Breeding Bird Atlas (KBBA). The goal was to survey a portion of each of the state's more than 700 USGS topographic maps for nesting birds, recording evidence of nesting as possible, probable, or confirmed. Over 100 volunteers have participated in the KBBA across the state, and the Commission and KDFWR have continued to oversee the project. After a sixth field season that was just completed in 1990, more than 650 quadrangles have been surveyed, leaving a manageable total of 50-75 to be completed in the seventh and final field season in 1991.

Many new county nesting records have been reported during the six years of field work, including the first nesting records in Kentucky of the Short-eared owl and the Brown creeper. In addition, noteworthy range extensions of at least a dozen other species have been documented, and the status of many others clarified to a point never before achieved. In all, 150 species of birds have been documented as confirmed or probable breeders during the effort. Unfortunately, other species have *not* been located during the KBBA project that were formerly known to nest in the state, including the Anhinga, Double-crested cormorant, and Vesper sparrow.

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Miami University presented a rather ominous and thought-provoking insight into the projected effects of global warming and its impact on efforts to protect natural areas.

Throughout the conference, Heritage program personnel met to discuss common problems and goals. As an additional highlight, conference participants were also invited to Mammoth Cave National Park to attend and participate in its dedication as a Man in the Biosphere Reserve. A biosphere reserve represents a specific ecosystem and is a unique category of safeguarded, natural environments combining conservation and sustainable economic use of natural resources. They are places for research, monitoring, education, and cooperation among government policy makers, scientists, and local people in managing land and water resources to meet human needs while conserving natural resources.

The conference was the culmination of several months of planning and hard work on the part of Commission staff. Additionally, if it had not been for the congenial staff of Park Mammoth Resort and the generous support of Mammoth Cave National Park personnel, the conference would not have been such a great success.

(continued from Volunteers on page 2)

Washle, Kent Miller, and Tony Morrison for the long hours they spent on this labor-intensive job.

As the nature preserve system continues to grow (22 preserves and counting), volunteer support will become even more important to the successful management of each preserve. If you would like to help us protect Kentucky's rare species and their unique habitats, please let us hear from you. The Stewardship program needs assistance with trail construction and maintenance, tree and brush removal, erosion control, rare species monitoring, and prescribed burning, to name a few of the more pressing activities planned for the coming year. If you are interested in providing your expertise to enhance our program, please contact Joyce Bender, Stewardship Coordinator, at the Commission office.

Glade Cress Endangered

During March and April of 1990, a status survey was conducted for Glade cress (*Leavenworthia exigua* var. *laciniata*), a rare member of the Mustard Family that is endemic to a small area of Kentucky. The prognosis for the long-term survival of Glade cress is not good because of the rapid population growth of Bullitt County that has placed extreme pressure on the remaining habitat needed by the species.

Glade cress is restricted to a portion of the northeast quarter of Bullitt County and a very small portion of extreme southeast Jefferson County. A total of 71 populations have been documented and at least 7 of these have been destroyed. It grows primarily in rocky glades (open, treeless areas with thin soil and bedrock near or at the surface) underlain by dolomite or dolomitic limestones. Most of the natural glade habitats where this plant occurs have been severely impacted or degraded, due mainly to construction of new houses and roads. Some populations occur in overgrazed pastures and some persist in lawns of newly constructed homes.

The survey was conducted to determine the current status of this rare plant so the U. S. Fish and Wildlife Service (USFWS) could decide if the plant warrants protection under the federal Endangered Species Act. The USFWS provided funds to the Commission for the survey. Although Glade cress is considered endangered in Kentucky by the Kentucky Academy of Science and the Commission, it has no legal protection in the state. The Commission is working with The Nature Conservancy to protect at least a few of the best remaining populations.

Natural Heritage

Kentucky's most complete source of information about the finest remaining natural communities and populations of endangered and threatened species is the Natural Heritage Program. The Natural Heritage Program is a continuously updated, gigantic encyclopedia of ecological data tied to specific segments of the landscape.

The Nature Preserves Commission coordinates the development and maintenance of the Natural Heritage Program, and was one of the first participants (in 1978) in what has become a 50-state Natural Heritage Program network overseen by The Nature Conservancy's Science Division.

Data are kept in map, manual, and computer files, allowing a multitude of retrieval possibilities. Currently over 7000 records of rare species are included. Additionally, almost 400 sites considered worthy of preservation, some of which contain the best remaining examples of pre-settlement Kentucky's natural communities, are tracked. A database of areas managed for conservation purposes is also maintained.

Such a huge undertaking has been possible only because of the cooperation and generosity of many

different individuals and institutions. Contributions from herbarium and museum curators, professional field biologists from government and private industry, amateur field biologists, and university researchers are part of the Heritage database.

Most importantly, the Natural Heritage Program database is used by governmental agencies, researchers, private industry, and conservation organizations for the purposes of making land-use decisions that do not impact critical areas, expanding our knowledge about these fragile species and communities, and targeting limited resources to the protection of natural areas.

The Kentucky Natural Heritage Program provides an invaluable service to the present and future citizens and denizens of the Commonwealth.

Rare Plant Studies

Seven federally threatened and endangered plant species will be studied this year to learn more about their distribution and the actions that are needed to help these plants recover. Funding from the U.S. Fish and Wildlife Service under Section 6 of the Endangered Species Act is being used to complete these projects.

Recovery plans will be written for two species, outlining the work that needs to be done to remove them from the list of federally threatened plants: White-haired goldenrod (*Solidago albopilosa*), distinguished by its covering of fine, white hairs, is found exclusively in rockhouses within the Red River Gorge Area; Price's potato bean (*Apios priceana*), a vine found in forest openings and edges, is known from only 13 locations in 4 states.

The search will continue in Kentucky for more populations of Running buffalo clover (*Trifolium stoloniferum*). We also hope to discover new locations for the Cumberland sandwort (*Arenaria cumberlandensis*) which is only known from 2 locations in Kentucky. Status surveys will be completed for the White fringeless orchid (*Platanthera integrilabia*), Braun's rock cress (*Arabis perstellata* var. *perstellata*), and Eggert's sunflower (*Helianthus eggertii*).

Kentucky State Nature Preserves Commission
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Commissioners
Mrs. W.L. Lyons Brown, Chairman
Hugh Archer, Secretary
Harold Duckworth
Randall Farris
Kenneth Jackson

Richard Hannan, Director

1991 Commission meeting dates will be February 20, May 22, July 31, and October 23. Places and times will be announced later.



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